

I Claim:

1. A telephone communication system comprising:
an analog telephone line having analog voice
signals carried by a subscriber loop; and
5 a digital data line sharing said subscriber loop
with said analog telephone line, said digital data line
having a digital voice channel for placing telephone
voice calls.
2. The invention of claim 1 wherein the analog
10 telephone line and the digital data line simultaneously
provide two or more voice channels over the subscriber
loop.
3. The invention of claim 1 wherein the analog
telephone line comprises a POTS line.
- 15 4. The invention of claim 1 wherein the digital
data line comprises a high-capacity digital subscriber
line.
5. The invention of claim 1 wherein the digital
data line comprises an asymmetric digital subscriber
20 line.
6. The invention of claim 1 wherein the digital
data line comprises multiple data and voice channels.
7. The invention of claim 1 wherein the digital
data line comprises an ATM transport protocol.
- 25 8. The invention of claim 1 further comprising
an interworking unit which interfaces the digital voice
channel from said digital data line into a circuit-
switch protocol.
9. The invention of claim 8 wherein said digital
30 voice channel is carried by an ATM transport protocol.
10. The invention of claim 8 wherein the circuit-
switch protocol comprises a TR-303 interface.
11. A telephone communication system comprising:
means for providing a telephone line having analog
35 voice signals carried by a subscriber loop; and

means for providing a digital data line sharing said subscriber loop with said telephone line, said digital data line providing a digital voice channel for placing telephone voice calls.

5 12. The invention of claim 11 wherein said means for providing a telephone line comprises a central office switch.

10 13. The invention of claim 11 wherein said means of providing a digital data device include a digital carrier system.

14. The invention of claim 11 further comprising a means for separating analog voice signals from digital data signals.

15 15. The invention of claim 14 wherein said means of separating analog voice signals includes a splitter comprising a high-pass and a low-pass filter.

16. A method of providing a digital telephone line comprising:

20 providing an analog telephone line with analog voice signals carried on a subscriber loop; and
 providing a digital data line on said subscriber loop with said analog telephone line, said digital data line having a digital voice channel; and
 placing a telephone voice call over a digital
25 voice channel of said digital data line.

17. The method of claim 16 further comprising the step of:

interfacing said telephone voice call carried by a data protocol to a switch protocol.

30 18. The method of claim 17 wherein said step of interfacing comprises converting a telephone voice signal carried by the data protocol to a switch protocol.

35 19. The method of claim 18 wherein said step of interfacing comprises the steps of:

converting said telephone voice call carried by
the data protocol to an analog voice signal; and
converting said analog voice signal to a switch
protocol.